

What is claimed is:

1 1. A method of upgrading operational software in a host
2 device having a smart card interface, comprising the steps of:

3 providing a smart card including data representing upgraded
4 software for the host device;

5 interfacing the smart card with the smart card interface of the
6 host device,

7 recognizing, in the host device, the smart card as including the
8 upgraded software; and

9 transferring the upgraded software from the smart card to a
10 memory of the host device to perform the code upgrade.

1 2. A method according to claim 1, wherein the step of
2 recognizing the smart card as including the upgraded software includes the
3 steps of:

4 accessing a card information structure (CIS) of the smart card;
5 and

6 comparing the CIS to predetermined parameters which identify
7 the smart card as a software upgrade smart card.

1 3. A method according to claim 1, wherein the smart card
2 includes (National Renewable Security Standard) NRSS conditional access
3 protocols and the step of recognizing the smart card as including the upgraded
4 software includes accessing application information specified by the NRSS.

1 4. A method according to claim 1, further wherein the host
2 device is an open cable compliant set top box, coupled to a cable head end
3 and includes an out of band channel for transferring data between the host
4 compliant device and the cable head end and the method further includes the

5 step of sending a message to the cable head end via the out of band channel to
6 indicate that the upgraded software has been transferred to the host compliant
7 device.

1 5. A smart card for providing a code upgrade to an open
2 cable compliant host device, comprising a memory for holding upgraded
3 software for delivery to the host device, the memory also including a card
4 information structure (CIS) for identifying the smart card as a code upgrade
5 card.

1 6. A smart card according to claim 5, wherein the memory
2 is a flash memory.

1 7. A smart card according to claim 6, wherein the smart
2 card conforms to standards adopted by one of the personal computer memory
3 card international association (PCMCIA) and the Japan electronic industry
4 development association (JEIDA).

1 8. A smart card according to claim 5, further including
2 identification data which identifies a host compliant device for which the
3 upgraded software is intended.

1 9. An open cable compliant set top box comprising:

2 a point of deployment (POD) interface;

3 a smart card, coupled to the POD interface;

4 a processor, coupled to the POD interface; and

5 a memory, coupled to the processor, the memory including:

6 operational software that controls the set top box; and

7 a bootstrap loader which is configured to control the processor
8 to transfer program data from the POD interface to the memory to overwrite
9 the operational software.

1 10. An open cable compliant set top box according to claim
2 9, wherein the smart card includes a card information structure (CIS) data
3 which identifies the smart card as a POD card or a software update card and
4 the memory includes further software, configured to control the processor to
5 read the CIS data.

1 11. An open cable compliant set top box according to claim
2 10, wherein the smart card conforms to standards adopted by one of the
3 personal computer memory card international association (PCMCIA) and the
4 Japan electronic industry development association (JEIDA).

1 12. An open cable compliant set top box according to claim
2 11, wherein:

3 the smart card further includes identification data which
4 identifies a host compliant device for which the upgraded software is
5 intended; and

6 the memory further includes software that causes the processor
7 to read the identification data from the smart card and to compare the
8 identification data to identification data for the set top box;

9 whereby the processor determines if the software update is
10 appropriate for the set-top box.

1 13. A method of providing a software upgrade to an open
2 cable compliant host device coupled to a cable television (CATV) head end,
3 comprising:

4 providing a smart card including the software upgrade for
5 transfer to the host device;

- 6 interfacing the smart card with a POD interface of the host
7 device;
- 8 resetting the host device;
- 9 reading and processing a code information structure (CIS) of the
10 smart card to identify the smart card as providing the software upgrade;
- 11 reading the software upgrade of the smart card; and
- 12 writing the software upgrade to a memory of the compliant host
13 device.
- 1 14. A method according to claim 13, further comprising the
2 steps of:
- 3 determining whether the software upgrade was successful; and
- 4 sending a message to the CATV head end when the software
5 upgrade is complete.

10047993 109601